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(71) Applicant (for all designated States except US): THE  
REGENTS OF THE UNIVERSITY OF CALIFORNIA  
[US/US]; 1111 Franklin Street, 12th Floor, Oakland, CA  
94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MAJUMDAR,  
Arun [US/US]; 151 Ardith Drive, Orinda, CA 94563  
(US). SHAKOURI, Ali [IR/US]; 246 Dickens Way, Santa  
Cruz, CA 95064 (US). SANDS, Timothy, D. [US/US];  
1712 Del Monte Way, Berkeley, CA 94705 (US). YANG,  
Peidong [CN/US]; 3001 Derby Street, #F, Berkeley, CA  
94705 (US). MAO, Samuel, S. [CN/US]; 7325 Lamar  
Loop, Castro Valley, CA 94552 (US). RUSSO, Richard,  
E. [US/US]; 123 Crosby Court, #3, Walnut Creek, CA  
94598 (US). FEICK, Henning [DE/US]; 37 Kerr Avenue,  
Kensington, CA 94707 (US). KIND, Hannes [CH/CH];  
Steigstrasse 94, CH-8200 Schaffhausen (CH). WEBER,

Eicke, R. [US/US]; 6995 Elverton Drive, Oakland, CA  
94611 (US). HUANG, Michael [US/US]; 11120 Queens-  
land Street, H53, Los Angeles, CA 90034 (US). YAN,  
Haoquan [CN/US]; 257 Wilson Street, Albany, CA 94710  
(US). WU, Yiyang [CN/US]; 257 Wilson Street, Albany,  
CA 94710 (US). FAN, Rong [US/US]; 5550 Central  
Avenue, #7, El Cerrito, CA 94530 (US).

(74) Agent: O'BANION, John, P.; O'Banion & Ritchey LLP,  
Suite 1550, 400 Capitol Mall, Sacramento, CA 95814 (US).

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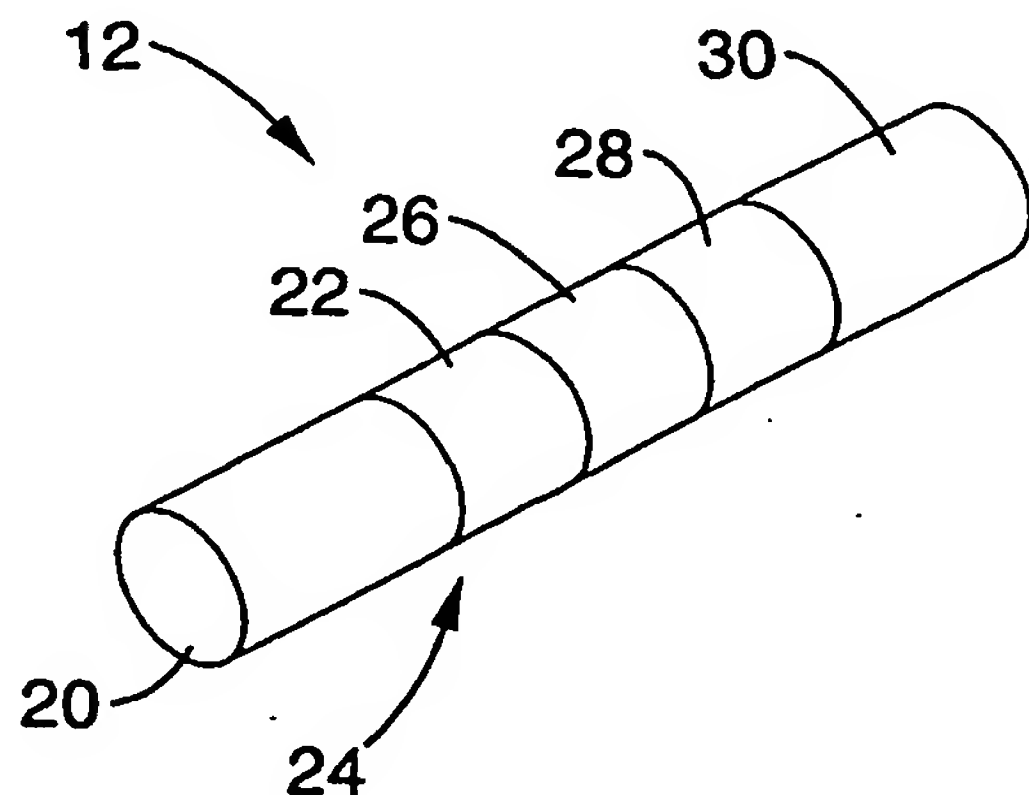
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FROM



(57) Abstract: One-dimensional nanostructures having uniform  
diameters of less than approximately 200 nm. These inventive  
nanostructures, which we refer to as "nanowires", include single-  
crystalline homostructures as well as heterostructures of at least  
two single-crystalline materials having different chemical compo-  
sitions. Because single-crystalline materials are used to form the  
heterostructure, the resultant heterostructure will be single-crys-  
talline as well. The nanowire heterostructures are generally based  
on a semiconducting wire wherein the doping and composition  
are controlled in either the longitudinal or radial directions, or in  
both directions, to yield a wire that comprises different materi-  
als. Examples of resulting nanowire heterostructures include a  
longitudinal heterostructure nanowire (LOHN) and a coaxial het-  
erostructure nanowire (COHN).

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